

*10001 578, 211.*

USSR/Cultivated Plants - Fruits and Berries.

M-5

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10989

Author : Kovalev, N.V., Tupitsyn, D.I.

Inst : Fruit and Berry Institute imeni Shreder, Central Asian  
Station of the VIR /All-Union Institute of Plant Culti-  
vation/. Chinese Pears in Central Asia.

Orig Pub : Izv. AN UzSSR, 1956, No 8, 97-98

Abstract : On the territory of Uzbekistan the Fruit and Berry Insti-  
tute imeni Shreder and the Central Asian Station of the  
All-Union Institute of Plant Husbandry have collected a  
significant quantity of varieties of Chinese pear spe-  
cies. Observations have demonstrated that the Chinese  
pear growing in Central Asia are resistant to heat and  
diseases. It is recommended that more be introduced  
into cultivation. A description of them is given.

Card 1/1

TUPITSYN, D.I., kand. sel'skokhozyaystvennykh nauk

Winter hardiness and biology of development of fruit buds in the  
plums of Uzbekistan. Trudy po prikl. bot., gen. i sel. 30 no. 3:224-  
247 '57. (MIRA 11:7)

(Uzbekistan--Plum)  
(Buds)

USSR/Cultivated Plants - General Problems.

M.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15462

Author : N.V. Kovalev, K.S. Glushchenko, D.I. Tupitsyn

Inst : Shreder Fruit and Berry Institute.

Title : Fruit and Berry Crops in the Down Stream Region of the  
Amu-Dar'ya.  
(Plodovyye i ovoshchnyye kul'tury v nizov'yakh Amu-Dar'i).

Orig Pub : V sb.: Materialy po proizvodit. silam Uzbekistana.  
Vyp. 2. Tashkent, AN UzSSR, 1956, 5-89.

Abstract : In the down stream regions of the Amu-Dar'ya in Kara-Kalpak ASSR and Khorezmskaya Oblast' the garden areas may be increased from 3200 hectares to 15-20 thousand hectares. The results of the study made by the Expedition of the Fruit and Berry Institute im. Shreder are

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USSR/Cultivated Plants - General Problems.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15462

discussed which was made in this zone in 1951-1953. The Tashauzskaya Oblast' of Turkmenistan has also been investigated. The cultivation of apples, grapes and apricots is recommended. At present apples occupy 5-11% of all the orchard area. Recommended varieties are the white rosemary, Sinirenko rennet, Orleans rennet, the summer golden parmen, the Grayna golden, Kandil'-Sinap, the jonathan, Borovinka, the melba, and among the new varieties, the gulyandon, Tallya-alma, the Tashkent rennet, and several local varieties. At the Khorezmsk Oasis the pear crop goes back ~2 thousand years. Seven percent of the area of the new orchards (~2 thousand hectares) is planned for pears. The local varieties of apricots are classified and the best of these are recommended. The local apricot varieties exhibit greater winter hardiness, heat resistance and salt resistance. The local forms of pear, apricot, plum, cherry,

Card 2/3

1. KOVALEV, N. V., TUPITSYN, D. I.
2. USSR (600)
4. Main Turkmen Canal Region - Apple
7. Apple trees in commercial fruit culture in the Main Turkmen Canal region. Sad 1  
og. no. 10, '52.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

TUPITSYN, I.F.; SEMENOVA, N.K.

Kinetics of deuterium-protium exchange in pyridine dissolved in liquid ammonia. Trudy GIKH no.49:120-132 '62.

Isotopic effects in the reactions of hydrogen exchange in liquid ammonia. Ibid.:133-140

Distribution of deuterium between the ring and alkyl group in the ethylbenzene molecule in the isotopic exchange with liquid DBr. Ibid.:159-161

(MIRA 17:11)

TUPITSYN, I.F.; KOMAROV, V.I.

Hydrogen rearrangement in pyrrole. Trudy GIPKh no.49:141-148 '62.  
(MIRA 17:11)

MKHITARYAN, L.S.; ANDREYEVA, T.M.; TUPITSYN, G.I.

Electrodeposition of metals on chromium. Biul.tekh.-ekon.inform.  
no.11:63-64 '60. (MIRA 13:11)

(Electroplating)



SOV/137-58-11-23085

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 177 (USSR)

AUTHORS: Tupitsyn, G. I. , Mkhitar'yan, L. S.

TITLE: Investigation of Protective Properties of Metallic Coatings (Issledovaniye zashchitnykh svoystv metallicheskih pokrytiy)

PERIODICAL: V sb. : Korroziya i zashchita metallov. Moscow, Oborongiz, 1957, pp 145-183

ABSTRACT: A study was made of the comparative characteristics of the corrosion behavior of 30KhGSA steel protected by various metallic coatings. In the atmosphere of an industrial area (urban Moscow), the protective properties of a Zn coating are considerably higher than those of a Cd coating; in a marine atmosphere (city of Batumi) and in a corrosion chamber filled with fresh water fog Zn and Cd coatings 5  $\mu$  thick provide protection for steel for 5 years; and upon full immersion in running fresh water or intermittent immersion in synthetic sea water Cd coatings 10  $\mu$  thick protect steel for 3 years. Chrome-, nickel- and tin-plated specimens corrode rapidly upon intermittent immersion in synthetic sea water and also in the atmosphere of the industrial area of Moscow; upon full immersion in tap water Ni and Cr coatings from

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SOV/137-58-11-23085

Investigation of Protective Properties of Metallic Coatings

5 to 50  $\mu$  thick provide protection of specimens for 3 years; in the Batumi atmosphere coatings of Ni, Cr, and Sn 20  $\mu$  thick showed good protective properties. Composite coatings (Ni-Cu-Cr, Cu-Ni-Cr, Cu-Cr) provided a good protection for steel during 3 years of full immersion in running tap water; with intermittent immersion coatings up to 35  $\mu$  thick corroded quickly, while composite coatings with a total thickness of the layer greater than 20  $\mu$  provided protection in a fresh water fog chamber for 3 years; Cr coatings with an undercoat, with a total thickness of 20  $\mu$ , provide protection for 4.5 years in the Batumi atmosphere; Ni coatings under these conditions protect steel but the Ni itself is rapidly attacked; the protective properties of composite coatings 35  $\mu$  thick in an industrial atmosphere are low; the best protection is provided by a Cr coating in a Ni-Cu-Cr combination.

L. A.

Card 2/2

TUPITSYN, G.I.; SHEYKO, T.S.; YAKIMOV, S.Ya., red.; ANTONOVA,  
S.D., red.izd-va; VLADIMIROVA, M.S., tekhn.red.

[Industrial safety and sanitation in electroplating shops]  
Tekhnika bezopasnosti i proizvodstvennaia sanitariia v  
gal'vanicheskikh tsekhakh. Izd.2., perer. Moskva, Oboron-  
giz, 1963. 206 p. (MIRA 17:3)

86160

S/193/60/000/011/017/022

A004/A001

187400 1087

AUTHORS: Mkhitaryan, M. S., Andreyeva, T. M., Tupitsyn, G. I.

TITLE: 18 Electrodeposition of Metals on Chromium 21

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, 1960, No. 11,  
pp. 63-64

TEXT: When depositing a nickel layer of approximately 25 $\mu$  on a chromium plating a cracking of the chrome is not observed even at temperatures considered high for nickel and chromium. In order to obtain a strong bond between the chromium and nickel layers a special technology has been developed to prepare the chromium-plated surface. The chromium-plated parts are degreased in an ordinary alkali bath. After being washed in hot and cold running water the component is pickled in 50% hydrochloric acid and held until a uniform gassing can be observed over the whole surface. Then the components are nickel-plated in one of the electrolytes the composition of which is shown in the following table:

Table

A) electrolyte composition; B) component concentration in the electrolytes;  
1) nickel-chloride, gram/liter; 2) nickel-sulfate, gram/liter; 3) hydrochloric

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Electrodeposition of Metals on Chromium

acid, milliliter/liter (specific gravity 1.19); 4) sulfuric acid, milliliter/liter (specific gravity 1.84); 5) current density,  $\text{a/dm}^2$ ; 6) temperature, centigrades; 7) electrolysis time.

A) Состав электролита	B) Концентрация компонентов в электролитах		
	1-й	2-й	3-й
1) Хлористый никель, г/л . . . . .	220—250	200—240	—
2) Сернокислый никель, г/л . . . . .	—	—	300—400
3) Соляная кислота, мл/л (уд. вес 1,19)	250—350	180—220	—
4) Серная кислота, мл/л (уд. вес 1,84)	—	—	5—15
5) Плотность тока, $\text{a/dm}^2$ . . . . .	30—40	4—5	5—10
6) Температура, град. . . . .	18—40	18—35	65—75
7) Время электролиза . . . . .	20—40 сек	2—3 мин	—

After a preliminary nickel-plating in the electrolytes 1 and 2, final nickel-plating takes place in the No. 3 electrolyte at a current density in the range of 5-8  $\text{a/dm}^2$  for one hour to a thickness of 50-75  $\mu$ . In some cases the preliminary nickel plating can be omitted. The nickel deposits obtained by the method


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Electrodeposition of Metals on Chromium

described are characterized by their high oxidation resistance and strong bond between the inner (chromium) and outer (nickel) layer. No flaking or blistering occurs in such coatings even at high temperatures in the range of 800 - 1,000°C. There is 1 table.



Card 3/3

TUPITSYN, G.I.

Preparing anodes for chromium plating of die-casting molds. Biol.  
tekhn.-ekon.inform. no.12:59-60 '60. (MIRA 13:12)  
(Chromium plating)

TUPITSYN, G. I.

PHASE I BOOK EXPLOITATION

935

Korroziya i zashchita metallov (Corrosion and Protection of Metals) Moscow, Oborongiz, 1957. 366 p. 3,000 copies printed.

Ed. (title page): Ambartsumyan, R. S., Doctor of Technical Sciences, Professor;  
Ed. (inside book): Lagovskaya, M. S.; Tech. Ed.: Rozhin, V. P.; Managing  
Ed. : Latynin, Ye. V.

PURPOSE: This book is intended for engineering, technical, and scientific personnel at industrial plants, research institutes, and design offices working in the field of corrosion-protection of stainless steel, high-strength structural steel, and light alloys.

COVERAGE: The book contains a collection of articles which deal with the corrosion and passivity of metals in various oxidizing media, corrosion of high-strength steels under tension, corrosive cracking, intergranular corrosion and pitting of aluminum alloys, and with certain questions of the anodic oxidation of these alloys. Articles on the corrosive cracking of magnesium alloys and means of protection against it are also included.

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Corrosion and Protection of Metals

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Golubev, A. I.; Tumanov, A. N.; Filippova, A. P. Behavior of Structural Components of Aluminum Alloys in the Process of Chemical Oxidation and Anodizing in Sulfuric Acid

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Chebotareva, I. I.; Golubev, A. I. Investigation of the Processes of Anodizing Aluminum Alloys in Oxalic Acid

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Golubev, A. I.; Makarov, N. A.; Samokhvalov, L. N. Filling the Pores of Oxide Films Obtained by Anodic Oxidation of Aluminum and Its Alloys

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AVAILABLE: Library of Congress

GO/gmp  
12-30-58

Card 4/4.

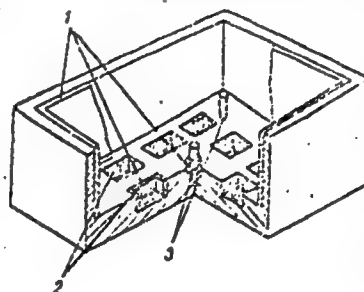
S/193/60/000/012/015/018  
A004/A001

AUTHOR: Tupitsyn, G. I.

TITLE: Manufacturing Anodes for the Chrome-Plating of Press Molds

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, 1960, No.12, pp.59-60

TEXT: Since the throwing power of chromium electrolytes is rather low, which leads to a non-uniform distribution of the chrome coat on the press-mold surface, new profiled anodes have been developed which have the shape of the part being chrome-plated. Each surface section of these anodes is located at the same distance from the press-mold being chrome-plated. The best material for such anodes is a lead alloy containing 6-8% antimony. The clearance between anode and cathode should be 2-6 mm, provided the press-mold design permits such an arrangement. The necessary clearance on the inner surface of the press-mold (in the vertical plane) is ensured by an aluminum-plate lining - or of the  $AM_{15}$  ( $AM_{ts}$ ) alloy. The illustration shows the outer view of a press mold ready for



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### Manufacturing Anodes for the Chrome-Plating of Press-Molds

the anode filling.

Figure:

1 - aluminum lining; 2 - recesses; 3 - studs.

For the escape of the gas liberated during the chrome-plating process one or several holes are provided in the press-mold. These holes are easily made during the pouring by inserting aluminum tubes of the necessary diameter (10 - 20 mm) in those spots where an accumulation of the liberated gas is likely. The tubes are fixed prior to the pouring of the lead alloy. The cooled anode is shaken out from the press mold and uneven spots are cleaned. To ensure the given position of the anode relative to the cathode, fixing pins with caps of insulating material are fitted to the upper edge of the press-mold, while the anodes are equipped with the corresponding recesses. Anodes of the described shape ensure the deposition of a uniform chromium layer in the range of 5 - 25  $\mu$ . After operation the anodes should be cleaned daily from lead chromate in a 7-10% aqueous solution of caustic soda for 20 - 50 minutes and then carefully washed with warm water. A<sub>2</sub> good cleaning effect is also attained by the cathode treatment (15 - 20 amp/dm<sup>2</sup>) of anodes in an alkali solution, for 8 - 10 minutes at room temperature. There is 1 figure.

Card 2/2

TUPITSYN, G. I., Engr.      Cand. Tech. Sci.

Dissertation: "Properties of Porous Chromium Plating." All-Union Sci Res Inst of Aviation Materials—VIAI, 28 Mar 47.

SC: Vechernnyaya Moskva, Mar, 1947 (Project #17836)

TUPITSYN, G. I., Engineer

"Properties of Porous Chromium Plating." Sub 28 Mar 47, All-  
Union Sci Res Inst of Aviation Materials (VIAM)

Dissertations presented for degrees in science and engineering  
in Moscow in 1947.

SO: Sum. No. 457, 18 Apr 55

PROCESS AND PROPERTIES INDEX																									
<p><i>M</i></p> <p><b>Zinc, Instead of Cadmium, Coating.</b> V. O. Krenig and G. I. Tupitsyn  <i>(Aviation. Prom., 1941, (11), 15-16).—[In Russian.]</i> Production methods of                      electrolytically coating steel aeroplane parts are reviewed. The advantages                      of zinc, as compared with cadmium coating, are pointed out. D. A.</p> <p><i>Y</i></p>																									
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p> <p>6304. 514.01.000</p> <p>6304. 514.01.000</p> <p>6304. 514.01.000</p>																									



ABRAMOV, F.A., prof.; TUPITSYN, G.M., dotsent; RIPP, M.G.; MILETICH, A.F.

DGI axial, compressed-air driven fans. Izv. DGI 31:125-130 '58.

(MIRA 11:7)

(Fans, Mechanical--Pneumatic driving)

TUPITSYN, G.M., kand.tekhn.nauk [deceased]; MURZIN, V.A., kand.tekhn.nauk;  
TSEYTLIN, Yu.A., kand.tekhn.nauk

Results of experimental studies of the performance of OK-500-92  
turbocompressors. Ugol' Ukr. 5 no.4:20-21 Ap '61. (MIRA 14:4)

1. Dnepropetrovskiy gornyy institut.  
(Coal mines and mining--Equipment and supplies)  
(Compressors)

TUPITSYN, I.

Everlasting paints. Tekh.mol.23 no.9:38 S'55. (MLRA 8:12)  
(Encaustic painting)

*TUPITSYN, I. I.*

TVARDOVSKIY, I.P.; TUPITSYN, I.P.

Nickel boride catalysts. Probl. kin. i kat. 9:84-90 '57. (MIRA 11:3)  
(Catalyst, Nickel--Spectra)

TUPITSYN, I. F.; KOMAROV, V. I.; Primala uchastiye BOTVINKINA, A. A.

Study of the migration of deuterium from the hydroxyl group  
to the phenol ring. Zhur. ob. Khim. 34 no.6:1703-1710 Je '64.  
(MIRA 17:7)

10PITSYN, I.F.

21(7)

PHASE I BOOK EXPLOITATION SOV/1378

Sovremennoye oborudovaniye dlya raboty s radioaktivnymi izotopami; sbornik materialov (Modern Equipment for Working With Radioactive Isotopes; Collection of Materials) Moscow, Izd-vo glavnogo upravleniya po ispol'zovaniyu atomnoy energii pri sovete M-va SSSR, 1958. 110 p. (Series: Atomnaya energiya. Prilozheniye, 1958, no. 5) 8,450 copies printed.

Ed.: Zavodchikova, A.I.; Tech. Ed.: Popova, S.M.

PURPOSE: This book is intended for personnel engaged in activities involving the use of radioactive isotopes.

COVERAGE: This is supplement No. 5 to the periodical Atomnaya energiya for 1958. It contains 3 articles dealing with modern techniques, methods and apparatus for handling radioactive isotopes and may serve as a handbook in this respect. Schematic diagrams and illustrations of modern equipment for the remote handling of radioactive materials are given, as well as detailed descriptions of working principles.

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Modern Equipment (Cont.)

SOV/1378

Bochkarev, V.V., Ye. Ye. Kulish and I.F. Tupitsyn. Several Technical and Technological Problems of the Production of Radioactive Isotopes and Tagged Compounds in the USSR

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21(5) SOV/89S-58-5-1/4  
AUTHORS: Bochkarev, V. V., Kulish, Ye. Ye., Tupitsyn, I. P.  
TITLE: Some Technical and Technological Problems in the Production  
of Radioactive Isotopes and Tracer Compounds in the USSR  
(Nekotoryye tekhnicheskiye i tekhnologicheskkiye voprosy proiz-  
vodstva radioaktivnykh izotopov i mechenykh soyedineniy v SSSR)  
PERIODICAL: Atomnaya energiya, 1958, Supplement 5, pp 5 - 25 (USSR)  
ABSTRACT: In 1958, 110 radioactive isotopes were produced commercially.  
92 of them were formed by neutron irradiation. Prior to the  
irradiation the initial materials must be purified, if possi-  
ble, so that in the subsequent processing of the radioactive  
elements the impurity activities do not yield too much waste. Very  
often it is possible to carry out the irradiations with en-  
riched isotopes such as Fe<sup>55</sup>, Sn<sup>123</sup>, Te<sup>127</sup>, Se<sup>75</sup>, Cd<sup>115</sup>. The  
portions irradiated fluctuate between 0.5, 1.0, 10 and 20 cm<sup>3</sup>  
and were contained either in aluminum containers, boron-free  
glass bottles or plastic containers. The irradiation periods  
for isotopes with a half-life up to 3 days is 6, 9 or 15  
hours. Isotopes with a half-life period of 3-30 days are

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Production of Radioactive Isotopes and Tracer Compounds in the USSR

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irradiated for 30 days. Isotopes with a half-life of more than 30 days ( $S^{35}$ ,  $Ca^{45}$ ) are kept in the reactor for 90 days. For the production of the isotopes  $C^{14}$  and  $Cl^{36}$  the initial material is irradiated for 6 to 12 months. In order not to disturb the most favorable reactor flux distribution on the feeding of the reactor with the ampoules to be irradiated a load diagram of the single irradiation chambers was set up prior to the experiments. The feeding in the different channels is therefore carried out in such a way that the original flux distribution is maintained. The irradiated samples are treated radiochemically and the desired radioactive isotopes are separated. In certain cases certain compounds are marked by these radioactive isotopes. The still high amounts of the preparations are then divided and filled into smaller ampoules. In the USSR 280 of the 450 chemical compounds produced in the usual way were produced which are synthesized from  $C^{14}$ ,  $S^{35}$ ,  $H^3$ ,  $P^{32}$ ,  $Cl^{36}$ . For the production of tracer compounds only 1 or 2 initial materials are used for the isotopes mentioned above. In this connection it is often necessary to build-in the radioactive atoms into a

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Some Technical and Technological Problems in the SOV/89S-58-5-1/4  
Production of Radioactive Isotopes and Tracer Compounds in the USSR

certain place of a polyatomic molecule. The transition into a complex organic compound takes place by synthesis or other radiochemical methods such as isotopic exchange, reactions with "hot" atoms etc. The production of chemical compounds traced with soft  $\beta$  radiators is carried out at a preparation activity of 100 mC until some C are attained; this is done in laboratories equipped with glove boxes. For the production of organic compounds marked with  $C^{14}$  mainly the synthetic method is applied using almost always  $BaC^{14}O_3$  as an initial product. The possible intermediate products are listed in a table. The possibilities based on the synthetic method are mentioned by which various compounds marked with  $S^{35}$  can be obtained from barium sulfate as an initial substance. The discharge channels and boxes used in the laboratories are equipped with manipulators or gripping gloves. Moreover, they are equipped with filters collecting the aerosols and gaseous impurities. Furthermore, these rooms are equipped with own water, gas and vacuum supplies and dispose of special channels for the removal of radioactive waste products. Photographic

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Production of Radioactive Isotopes and Tracer Compounds in the USSR

representations are shown of 4 types of these boxes. Other very important appliances used in these radioactive laboratories are remote-control tools such as tongs, pincers, mirrors etc. Remote-controlled cutting tools, soldering bits etc. play an important part too. For the manipulation of very small volumes of active liquid volumes hydromanipulators, automatic remote-controlled burettes and pipettes are used. It is possible, for instance, to decant volumes 0.1 - 100 ml in accurate doses by means of such a hydromanipulator. Before dispatch each preparation is closely examined. The physico-chemical constants, the content of the main components, the total and the specific activity, the share of the active and inactive impurities are determined. As an example it is described how the content of the  $\gamma$ -isomer  $\text{Cl}^{36\text{m}}$  is determined in a hexachlorane preparation not yet purified. The quantitative determination of small concentrations is carried out mainly by spectrum analysis or by the polarographic method. Marked preparations used for medical or biological purposes are additionally examined as to their content of physiologically important admixtures. There are 14 figures and 2 tables.

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76-32-2-17/38

AUTHORS: Tupitsyn, I. F., Tverdovskiy, I. P.

TITLE: Investigations of the Process of the Dehydrogenation of a Skeleton Nickel Catalyst (Issledovaniye protsessa obezvodorozhivaniya skeletnogo nikelovogo katalizatora) I. The Investigation of the Dehydrogenation Process by Means of Electrochemical Methods (I. Izucheniye protsessa obezvodorozhivaniya elektrokhimicheskimi metodami)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1958, Vol. 32, Nr 2, pp. 349-354 (USSR)

ABSTRACT: This is a lecture held at the conference on the use of the methods of marked atoms in chemical industry, which took place from March 1 - 3, 1955. Data on the hydrogen content in skeleton nickel catalysts obtained according to various methods (References 1, 2 and 3) are given. It is shown that even with similar conditions of production of the catalyst samples the  $q_H$  values (hydrogen volume per gram of catalyst) hardly agree  $^2$  at all. In order to find the reasons for this

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76-32-2-17/38

Investigations of the Process of the Dehydrogenation of a Skeleton Nickel Catalyst. I. The Investigation of the Dehydrogenation Process by Means of Electrochemical Methods

divergence those processes which occur on the surface of the dehydrogenated catalyst in the presence of other substances, which could lead to the formation of additional hydrogen quantities (or on the other hand to the interruption of hydrogen separation) were investigated. It was found that in the case of an anode polarization by small amperages the skeleton nickel catalyst in the vicinity of the reversible hydrogen potential reacts like an electrochemically active nickel electrode. The method of charge curves was used for the determination of the nature of processes observed in the dehydrogenation of the skeleton nickel catalyst in aqueous alkaline medium. It is shown that in the case of dehydrogenation from the skeleton nickel by means of easily hydratable compounds processes occur on the surface of the catalyst the nature of which is about the same as in the case of the application of a small anode polarization with nickel. In both cases besides the dehydrogenation of the hydrogen enclosed in the catalyst two processes compete with each other, that is to say, the phase decomposition of nickel under formation of  $\text{Ni(OH)}_2$

Card 2/3



76-32-2-17/38

Investigations of the Process of the Dehydrogenation of a Skeleton Nickel Catalyst. I. The Investigation of the Dehydrogenation Process by Means of Electrochemical Methods

and the passivation of the surface. There are 5 figures, 1 table, and 17 references, 12 of which are Soviet.

ASSOCIATION: Gosudarstvennyy institut prikladnoy khimii, Leningrad  
(State Institute for Applied Chemistry, Leningrad)

SUBMITTED: November 3, 1956

1. Nickel catalysts--Dehydrogenation 2. Hydrogen--Determination  
3. Nickel--Decomposition 4. Nickel--Passivity

Card 3/3

AUTHORS: Tupitsyn, I. P., Tverdovskiy, I. P. 76-32-3-15/43

TITLE: An Investigation of the Process of Dehydrogenation of a Skeleton Nickel Catalyst (Issledovaniye protsessa obezvodorozhivaniya skeletnogo nikelovogo katalizatora). II. The Use of Methods of Vacuum Dehydrogenation and Isotopic Dilution for the Determination of the Content of Sorbed Hydrogen (Ispol'zovaniye metodov vakuumnogo obezvodorozhivaniya i izotopnogo razbavleniya dlya opredeleniya soderzhaniya sorbirovannogo vodoroda)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1958, Vol. 32, Nr 3, pp. 598-602 (USSR)

ABSTRACT: The present paper investigates whether additional separation of hydrogen takes place during vacuum dehydrogenation in a steam atmosphere. In order to determine the quantity of hydrogen sorbed by a gram of skeleton nickel, the latter was produced with the use of a "heavy" alkali (with a certain content of deuterium) by leaching out aluminum from the aluminum-nickel alloy. The weighed portion of the deuterium-containing catalyst was treated with an acid, and in the gas formed from it, the deuterium content was

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An Investigation of the Process of Dehydrogenation  
of a Skeleton Nickel Catalyst.

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II. The Employment of Methods of Vacuum Dehydrogenation and  
Isotopic Dilution for the Determination of the Content of Sorbed  
Hydrogen

determined. Beside the advantages over other methods,  
this one has the disadvantage that hydrogen and deuterium  
are chemically not identical and that thus the calculation  
of the effects is incorrect. From the description of the ex-  
perimental part, it follows that an arrangement was used  
which also served for vacuum dehydrogenation, possessing  
a U-shaped manometer and a MacLeod manometer, that the  
moist sample was heated to 100-300°C and that the produced  
hydrogen is cooled by liquid-air cooling and measured in a  
measurement system. In the performed experiments, it was  
noticed that the nickel powder heated to 300°C is pyrophoric,  
which <sup>property</sup> vanishes at 800°C; this is traced back to the  
property of the surface of finely dispersed nickel. The  
results of the experiments show that in the vacuum method,  
the moisture exerts an influence upon the dehydrogenation.  
Quantities of 25-40 ml H<sub>2</sub>/g (at above 100°C) which  
formed from the surface moisture were determined in the

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An Investigation of the Process of Dehydrogenation  
of a Skeleton Nickel Catalyst.

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II. The Employment of the Methods of Vacuum Dehydrogenation and  
Isotopic Dilution for the Determination of the Content of Sorbed  
Hydrogen

experiments. This is ascribed to the too high values  
of Bougault (ref. 4)  $q_{H_2} \approx 140 \text{ ml } H_2/g$  and

the latter must be corrected, as the present results  
according to both methods (the vacuum and the isotopic  
method) yielded a value of 20-30 ml  $H_2/g$ . This is in

agreement with the data by Mozingo (reference 6) who, however,  
performed a different treatment of samples.

There are 1 figure, 3 tables, and 8 references, 6 of which  
are Soviet.

ASSOCIATION: Institut prikladnoy khimii, Leningrad  
(Leningrad, Institute of Applied Chemistry)

SUBMITTED: November 3, 1956

Card 3/3

TUPIYSYN, I.F.; TOMARCHENKO, S.L., red.

[Chemistry and technology of isotopes] Khimiia i tekhnologiiia izotopov; sbornik statei . Moskva, Khimiia, 1964. 181 p. (MIRA 18:5)

1. Leningrad. Gosudarstvennyy institut prikladnoy khimii.

ZATSEPINA, N.N.; TUPITSYN, I.F.; EFROS, L.S.

Hydrogen-isotope exchange in methyl derivatives of nitrogen heterocycles and their N-oxides. Part 2: Reactivity and electron structure of isomeric picolins, their N-oxides, and quaternary salts. Zhur. ob.khim. 34 no.12:4065-4071 D '64 (MIRA 18:1)

Hydrogen-isotope exchange in methyl groups of nitrogen heterocycles derivatives and their N-oxides. Part 3: Reactivity and electron structure of  $\alpha$  methyl substituted heterocycles and their N-oxides. Ibid.:4072-4080

ACCESSION NR: AR4020482

S/0081/64/000/001/B064/B064

SOURCE: RZh. Khimiya, Abs. 1B455

AUTHOR: Tupitsyn, I. F.; Semenova, N. K.

TITLE: A study of isotopic effects during exchange reactions in liquid ammonia

CITED SOURCE: Sb. tr. Gos. in-ta prikl. khimii, vy\*p. 49, 1962, 133-140

TOPIC TAGS: hydrogen exchange, tritium, deuterium, isotopic effect, thermodynamic isotope effect, kinetic isotope effect, liquid ammonia

TRANSLATION: Coefficients of distribution and rate constants were determined at several temperatures for the exchange of deuterium and tritium in benzene with liquid ammonia. It is shown that the thermodynamic isotope effect is constant and equals  $\alpha_D/\alpha_T = 1.4$ . The kinetic isotope effect (KIE) decreases gradually in benzene as the temperature rises from 0 to 40C. At 25C the KIE and the tritium distribution coefficient  $\alpha_T$  in naphthalene are equal, within the limits of accuracy of these measurements, to the corresponding values for exchange in benzene. A positive KIE (1.4 - 1.3) was observed for exchange in cyclohexane at

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ACCESSION NR: AR4020482

120C. An evaluation is given of the possible mechanism of origin of the KIE due to dissimilar tunnel effects of tritium and deuterium. Authors' summary

DATE ACQ: 18Feb64

SUB CODE: CH, PH

ENCL: 00

Card 2/2



ZATSEPINA, N.N.; TUPITSYN, I.F.; EFROS, L.S.

Isotopic exchange of hydrogen in methyl derivatives of nitrogen heterocycles and their oxides. Part 1:  $\alpha$ -picoline, quinaldine, and their N-oxide. Zhur. ob. khim. 33 no.8:2705-2712 Ag '63.  
(MIRA 16:11)

ZATSEPINA, N.N.; TUPITSYN, I.F.; EFROS, L.S.

Electronic structure and the rate of deuterium exchange in  
methyl groups of nitrogen heterocycles and their N-oxides.  
Dokl. AN SSSR 154 no.1:148-151 Ja'64. (MIRA 17:2)

1. Gosudarstvennyy institut prikladnoy khimii. Predstavleno  
akademikom A.N. Tereninym.

ADAMOV, M.N.; TUPITSYN, I.F.

Use of the free electron method in studying the effect of  
hyperconjugation. Vest. LGU. 18 no.16:41-46 '63. (MIRA 16:11)

47

TUPITSYN, I.F.

PHASE I BOOK EXPLOITATION

SOV/6333

Bochkarev, V. V., ed.

Tekhnika izmereniye radioaktivnykh preparatov; sbornik statey (Techniques for the Measurement of Radioactive Preparations; Collection of Articles) Moscow, Gosatomizdat, 1962. 4600 copies printed.

Eds.: A. M. Smirnova and M. A. Smirnov; Tech. Ed.: S. M. Popova.

PURPOSE: This book is intended for specialists in nuclear instrumentation.

COVERAGE: The book is a collection of articles on recent developments in 1) measurement of the activity and 2) analysis of the composition of emissions of radioactive preparations. The methodology and apparatus used in these studies are described in detail. References are given at the end of each article.

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Techniques for the Measurement (Cont.)

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Vorob'yev, A. A. Study of  $\alpha$ -Emitting Preparations With the Aid  
of a Gridded Ionization Chamber

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Bernotas, V. I., V. A. Gorodyskiy, N. K. Semenova, I. P.  
Tupitsyn, and O. A. Filippov. Direct Measurement of the Activity  
of Tritiated Compounds

41

Bernotas, V. I., Yu. A. Pirogov, and O. A. Filippov. Measurement  
of the Activity of Tritiated Thick Organic Films

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L'vova, M. A. Experimental Evaluation of the Accuracy of  
a Method for Measurement of  $\beta$ -Emitters by Means of End-Window  
Counters

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Turkin, A. D. Measurement of the Activity of  $\beta$ -Sources in  $4\pi$ -  
Ionization Chambers

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ADAMOV, M.N.; TUPITSYN, I.F.

Theoretical study of reactivity in substitution reactions of  
molecules with conjugate bonds using the free electron method.  
Part 3. Five-membered nitrogen heterocycles. Vest.LGU 17  
no.22:18 '62. (MIRA 15:12)

(Nitrogen compounds)

ADAMOV, M.N.; TUPITSYN, I.F.

Theoretical study of reactivity in substitution reactions of  
molecules with conjugate bonds using the free electron method.  
Part 1. Alternant and nonalternant hydrocarbons. Vest. LGU  
17 no.16:47-57 '62. (MIRA 15:9)  
(Chemical reactions) (Hydrocarbons)

ADAMOV, M.N.; TUPITSYN, I.F.

Theoretical study of reactivity in substitution reactions of  
molecules with conjugate bonds using the free electron method.  
Part 2. Six-membered nitrogen heterocycles. Vest. LGU 17 no.16:58-  
65 '62. (MIRA 15:9)  
(Chemical reactions) (Heterocyclic compounds)



TUPITSYN, I.F.; FRADKIN, G.M., nauchnyy red.; KOKOSOV, L.V., red.; KOR-  
SHUNOVA, N.I., tekhn. red.

[Deuterium and tritium, heavy hydrogen isotopes] Tiazhelye izotopy  
vodoroda deiterii i tritii. Moskva, Gos. izd-vo lit-ry v oblasti  
atomnoi nauki i tekhniki, 1961. 36 p. (MIRA 14:11)  
(Deuterium) (Tritium)

TUPITSYN, I.F.; FRADKIN, G.M., nauchnyy red.; KOKOSOV, L.V., red.; VLASOVA,  
N.A., tekhn. red.

[Radioactive carbon  $C^{14}$ ] Radioaktivnyi uglorod -  $C^{14}$ . Moskva, Gos.  
izd-vo lit-ry v oblasti atomnoi nauki i tekhniki, 1961. 34 p.  
(MIRA 14:12)

(Carbon--Isotopes)

TUPITSYN, I. E.

17

PHASE I BOOK EXPLOITATION SOV/5404

Murin, A. N., V. D. Nefedov, and V. P. Shvedov, eds.

Radiokhimiya i khimiya yadernykh protsessov (Radiochemistry and the Chemistry of Nuclear Processes) Leningrad, Goskhimizdat, 1960. 784 p. Errata slip inserted. 13,000 copies printed.

Ed.: F. Yu. Rachinskiy; Tech. Ed.: Ye. Ya. Erlikh.

**PURPOSE :** This textbook is intended for students of physical chemistry or radiochemistry at universities and schools of higher education. It may also serve as a handbook for scientific workers and technical personnel in the radiochemical industries and other related branches.

**COVERAGE:** The textbook deals with problems in modern radiochemistry, including adsorption, cocrystallization, isotope exchange in radioactive elements, the chemistry of nuclear processes, and methods of preparing radioactive isotopes and labeled compounds. Special attention has been given to chemical processes caused by radioactive transformations and radiation. In the main the book was compiled by person-

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Radiochemistry and the Chemistry (Cont.)

SOV/5404

nel of the Radiochemistry Department, Leningradskiy gos-  
udarstvennyy universitet imeni A. A. Zhdanova (Leningrad  
State University imeni A. A. Zhdanov), and the Department of  
the Technology of Artificial Radioactive Isotopes, Lenin-  
gradskiy tekhnologicheskii institut imeni Lensovet (Lenin-  
grad Technological Institute imeni Lensovet). No person-  
alities are mentioned. References accompany individual  
chapters.

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Ch. I. Distribution of Substances Between the Solid Crystal-  
line and the Liquid Phases. L. L. Makarov, V. D.  
Nefedov, and Ye. N. Tekster

1. The importance of distribution processes in radiochem-  
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Radiochemistry and the Chemistry (Cont.)	SOV/5404	
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2. Methods of studying fission reactions		639
3. Results of experimental study of fission reactions		645
4. Fission of nuclei and the formation process of multi-charge particles under the effect of high-energy nucleons		657
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1. Kinetic equation describing the rate of activity change in isotopes during their production in a nuclear reactor		661
2. Some practical problems in irradiating targets in a nuclear reactor		667

Card 13/16

L 34473-66 EWP(j) WW/JW/RM

ACC NR: AP6026204

SOURCE CODE: GE/0070/66/002/001/0023/0032

AUTHOR: Tupitsyn, I. F.; Semenova, N. K.; Zatsepina, N. N.; Musakin, A. A. 40  
B

ORG: Institute for Applied Chemistry, Leningrad

TITLE: Basic exchange hydrogen reaction of some nitrous heterocycles in liquid ammonia: kinetics, relation with electron structure, mechanism [This paper was presented at the 3rd Conference on Stable Isotopes held in Leipzig in October 1963.]

SOURCE: Isotopenpraxis, v. 2, no. 1, 1966, 23-32

TOPIC TAGS: pyridine, heterocyclic base compound, chemical kinetics, ammonia, toluene, radiation chemistry, isotope

ABSTRACT: The reactivity of the different positions of the aromatic ring of pyridine, quinoline, acridine, and phenazine was studied in the deuterio-exchange reaction with the  $\text{NH}_2^- + \text{NH}_3$  (liq.) solution. The rate constants, activation parameters, and kinetic isotope effects were determined. The kinetics of hydrogen exchange in toluene and  $\alpha$ - and  $\beta$ -picoline with the solution were also studied. The findings were explained in terms of the carbanionic mechanism. The authors thank A. A. Samakhov and G. G. Gusev who directed the work on the synthesis of the majority of the most useful deuterio-compounds. Orig. art. has: 10 tables. [Based on authors' Eng. abst.] [JPRS: 35,397]

SUB CODE: 07, 18 / SUBM DATE: 19Jul64 / ORIG REF: 008 / OTH REF: 014

Card 1/1 82

09/6 1751

TUPITSYN, K.K.; VASIL'YEV, B.P.

Analysis of the synchronization system of a hydraulic process.

Trudy Inst. avtom. i elektrometr. SO AN SSSR no.6:86-94 '64.  
(MIRA 17:10)

BESSONOV, L.A.; RTEMOVA, T.I., red.; TUPITSYNA, L.A., red.;  
FOTIYEV, V.M., red.

[Nonlinear electrical networks] Nelineinye elektricheskie  
tsepi. Izd.2., perer. i dop. Petrozavodsk, Vysshaya  
shkola, 1964. 429 p. (MIRA 17:8)



VOLOKHOV, A.N.; VOROB'YEV, A.A.; FEDOROV, M.F.; CHERTOV, A.G.,  
dots.; DUBOV, V.P., dots., retsenzents; ARTEMOVA, T.I.,  
red.; TUPITSYNA, L.A., red.

[Problems in physics with examples of their solution and  
reference materials] Zadachnik po fizike s primerami re-  
sheniia zadach i spravochnymi materialami. Petrozavodsk,  
Rosvuzizdat, 1963. 399 p. (MIRA 17:6)

1. Moskovskiy poligraficheskiy institut (for Dubov).

TIMOFEYEVA, L.V.; MITROFANOV, A.M.; MARKOVICH, N.Ya.; MURAV'YEVA, T.V.;  
SHVAN'KOV, M.Ye.; TUPITSYN, L.F.

Successful results in controlling bloodsucking black flies  
(Diptera, Simuliidae) by treating the breeding grounds; preliminary  
report. Med.paraz.i paraz. bol. no.1:3-9 '62. (MIRA 15:5)

1. Iz entomologicheskogo otdela (zav. - prof. V.N. Beklemishev)  
i otdela entomotoksikologii (zav. - prof. V.A. Nabakov) Instituta  
meditsinskoy parazitologii i tropicheskoy meditsiny imeni Ye.I.  
Martsinovskogo (dir. - prof. P.G. Sergiyev) Ministerstva zdra-  
vookhraneniya SSSR.

(BLACK FLIES---EXTERMINATION) (DDT (INSECTICIDE))

TUPITSYNA, L.I.

Phagocytic properties of the blood in children vaccinated against  
typhoid fever. Zhur. mikrobiol., epid. i imm. 41 no. 2:144-145  
F '64. (MIRA 17:9)

1. Nostovskiy meditsinskiy institut.

TUPITSYN, M.N.

Second conference of groups and shock workers of communist labor  
in the Urals. Razved. i okh. nedr 26: no. 12: 52-54 D '60.  
(MIRA 13:12)

1. Ural'skiy territorial'nyy komitets profsoyuza.  
(Prospecting)

GAVRILOV, V.G.[translator]; KLIMOVA, M.Ye.[translator]; MITREY, T.  
B.A.[translator]; TIKHONOV, N.S.[translator]; TUPITSYN,  
N.V.[translator]; SHANTANOV, S.K.[translator]; ~~FEDOROVA,~~  
L.N., red. izd-va; GUROVA, O.A., tekhn. red.

[Fundamentals of the tectonics of China]Osnovy tektoniki  
Kitaia. Moskva, Gosgeoltekhizdat, 1962. 526 p. maps.  
Translated from the Chinese. (MIRA 15:11)  
(China--Geology, Structural)

VASIL'YEV, V.V.; VRONSKIY, B.I.; YEROFYEV, B.N.; KECHEK, G.A.; KOSOV, B.M.;  
TUPITSYN, N.V.; TSAREGRADSKIY, V.A.; SHATALOV, Ye.T.

Sergei Dmitriyevich Rakovskii, obituary. Geol.rud.mestorozh.  
no.3:133-134 My-Je '62. (MIRA 15:6)  
(Rakovskii, Sergei Dmitrievich, 1899-1962)

LI SY-GUAN [Li Ssu-kuang]; SUN' DYAN-TSIN [Sun Tien-ch'ing]; U LEY-BO ;  
TUPITSIN, N.Y. [translator]; PAVLINOV, V.N., prof., red.; FEDO-  
ROVA, L.N., red. Izd-va; GUROVA, O.A., tekhn. red.

[Vortical and other rotary structures and the relationship  
between tectonic systems. Translated from the Chinese] Vkhre-  
vye i drugie struktury vrashcheniia i problemy sochetaniia tek-  
tonicheskikh sistem. Pod red. V.N. Pavlinova. Moskva, Gos.  
nauchno-tekhn. izd-vo lit-ry po geol. i okhrane nadr, 1960.  
118 p. (MIRA 14:5)

1. Kitayskaya Akademiya nauk (for Li Sy-guan) 2. Kabinet geodi-  
nemiki Ministerstva geologii Kitaya (for Sun' Dyan'-tsin, U Ley-bo)  
(China--Geology, Structural)

KUDRYAVTSEV, V.A. [translator]; MOISEYEVA, V.M. [translator]; TUPITSYN,  
N.Y. [translator]; TSZYAN TSZU-TSZE [Chiang Tsu-chieh] [translator];  
PAVLINOV, V.N., prof., red.; SAMARCHYAN, L.M., red.izd-va;  
POSPELOVA, A.M., red.izd-va; GUROVA, O.A., tekhn.red.

[Transactions of the First Conference on Recent Tectonic Movements  
in China] Trudy Pervogo soveshchaniia po neotektonike Kitais;  
sbornik dokladov. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol.  
i okhrane neдр, 1960. 185 p. (MIRA 13:12)

1. Soveshchaniye po neotektonike Kitaya, 1st, Peking, 1956.  
(China--Geology, Structural)



NALIVKIN, D.V., akademik, red.; TUPITSYN, N.V.; SERGEYEVA, N.A., red.  
izd-va; MAKEYEV, V.I., red. izd-va; GUROVA, O.A., tekhn. red.

[Planetary geology; some general tectogenetic factors and characteristics of the distribution of mineral deposits] Problemy planetarnoi geologii; o nekotorykh obshchikh prichinakh tektogeneza i zakonomernostiakh razmeshcheniya mestorozhdenii poleznykh iskopaemykh. Moskva, Gosgeoltekhizdat, 1963. 341 p.  
(MIRA 16:5)

(Astronomical geology)

TUPITSYN, N.Ye.; OKHICEM, A.A.

Ways to increase the output of cement. 13ement 28 no.6:5-6 N-D '62.  
(Cement plants) (MIRA 15:12)

TUPITSYN, O. V.

Tupitsyn. O. V. — "Investigation of the Stability of Operation of the Mechanism of Astronomic Clocks With Free or Loaded Pendulums." Cand Tech Sci, Moscow Higher Technical School, Moscow 1953. (Referativnyy Zhurnal--Astronomiya, Jan 54)

SO: SUM 168, 22 July 1954

TUPITSYN, O.V.

AUTHOR: Tupitsyn, O.V. 115-5-32/44

TITLE: Spring Suspension-Rods for Pendulums of Astronomic Clocks  
(O pruzhinnykh podvesakh mayatnikov astronomicheskikh chasov)

PERIODICAL: "Izmeritel'naya Tekhnika", No 5, Sep-Oct 1957, pp 76-77 (USSR)

ABSTRACT: The article describes design and production technology of a spring-type pendulum suspension employed by the plant "Etalon" in manufacturing astronomic clocks. Design of the spring suspension is described in full detail, including dimensions, tolerances, and grade of finish. It was confirmed by experiments that the cause of systematic advance of movement was caused by the properties of the suspension material. A heat treatment technology, described in detail, was worked out for spring steel "50XΦA" that possesses the necessary stable resilience and hardness. The suspension-manufacture heat treatment and the finishing in a special fixture are described in detail and shown by a drawing. The suspensions were mounted in the astronomic time-service clocks. Study during several years by VNIIFTRI has shown that the pendulum suspensions fully met the requirements and that the systematic advance of movement is eliminated. The described heat treatment technology was also applied by KhGIMIP in the production

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Spring Suspension-Rods for Pendulum of Astronomic Clocks

115-5-32/44

of isochronizing suspension-rods. The technology practiced by the "Etalon" plant is recommended also for the production of chronometer hair springs. The article contains 2 drawings.

AVAILABLE: Library of Congress

Card 2/2

TUPITSYN, O.V.

Brief review of the activity of institutes of the Committee of Standards, Weights, and Measuring Instruments concerning astronomical pendulum clocks. Izv. tekhn. no. 6:40-41 N-D '57. (MIRA 10:12)  
(Astronomical clocks)

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PLANE I BOOK EXPLANATION

804/2205

Vsesoyuznyy nauchno-issledovatel'skiy institut radio-tehnicheskikh i radiofizicheskikh imeniy

Imeniyevy yemskiy sbornik (Measurement of Time; Collection of Articles) Moscow, Fizmatgiz, 1950. 113 p. (Series: Itis Trudy, /777-1) Russian ally inserted. 2,000 copies printed.

Additional Sponsoring Agency: USSR. Kmitet standartov, ser 1 imeniyevy prihorov.

Reep. Ed. of this vol: A.I. Konstantinov; Editorial Board: G.D. Burdus, A.I. Dikler, V.I. Yemshov (Deputy Chairman), M.I. Koshchinsky, L.M. Likh, A.I. Konstantinov, V.P. Lobanov, (Chairman), V.P. Orlon, L.M. Pyatigorskii, I.G. Rusakov, N.A. Serebreni (Sec. Secretary), M.I. Titov; Ed. of Publishing House: G.M. Derydov; Tech. Ed.: M.I. Kondrat'yev.

PURPOSE: This book is intended for astronomers, geodesists, and other scientific personnel interested in the precise determination of time.

COVERAGE: This is the first of a series of periodicals to be published by the

Measurement of Time (Cont.)

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All-Union Scientific Research Institute of Physical-Technical and Radio-Technical Measurements. The present volume is concerned with the measurement of time and represents the results of the work of the Central Scientific Research Bureau of the Unified Time Service during the years 1947-1951. References accompany each article.

TABLE OF CONTENTS:

Lobanov, V.P. The State Time Service  
The article covers the development of the State Time Service for the last ten years. The development is described in relation to the corresponding requirements of science and industry.

Perlov, A.D. The View of V. Ya. Struve on the Problem of Evaluating the Precision of Interpolation and Extrapolation of Clock Corrections  
This article is devoted to the study of clock rates. Comparisons are made of the views and methods of Gauss, Struve, and Freylich.

Belgor, P.F. The Differential Method of Deriving Mean Corrected Moments of Rhythmic Time Signals and Evaluating Their Accuracy  
This article describes the technique of computing standard time by differential method. This method was developed for practical use in the Time Service by P. M. Freylich.

Lyubimov, G.L. Investigation of the Causes of the Systematic Acceleration of the Diurnal Rate of Astronomic Pendulum Clocks Manufactured by the "Stalino Plant"

Ylizarov, B.L. The Random Components of the Movement of Pullova (Observatory) Altimetric Maps  
This article discusses the stability of targets used by the Pullova Observatory for azimuth determination over a long period of time.

Freese, A.L. The Photo Chronoscope - A Device for the Precise Registration of Instants of Time

Card 3/4

A complete description of the design and principles of operation of photo chronoscope is given. The description is well illustrated with diagrams and photographs.

14PITsyn, O.D.

24(0): 5(4); 6(2) PHASE I BOOK EXPLOITATION SOV/2215  
Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii imeni  
D.I. Mendeleeva  
Referaty nauchno-issledovatel'skikh rabot; sbornik No. 2 (Scientific  
Research Abstracts; Collection of Articles, Nr 2) Moscow,  
Standartgiz, 1958. 139 p. 1,000 copies printed.  
Additional Sponsoring Agency: USSR. Komitet standartov, mer i  
izmeritel'nykh priborov.

Ed.: S. V. Reshetina; Tech. Ed.: M. A. Kondrat'yeva.

PURPOSE: These reports are intended for scientists, researchers,  
and engineers engaged in developing standards, measures, and  
gages for the various industries.

COVERAGE: The volume contains 128 reports on standards of measure-  
ment and control. The reports were prepared by scientists of  
institutes of the Komitet standartov, mer i izmeritel'nykh  
priborov pri Sovete Ministrov SSSR (Commission on Standards,  
Measures, and Measuring Instruments under the USSR Council of  
Ministers). The participating institutes are: VNIIM -  
Vsesoyuznyy nauchno-issledovatel'skiy metrologii imeni D.I.  
Mendeleeva (All-Union Scientific Research Institute of Met-  
rology imeni D.I. Mendeleeva) in Leningrad; Sverdlovsk branch  
of this institute; VNIIX - Vsesoyuznyy nauchno-issledovatel'skiy  
institut komiteta standartov, mer i izmeritel'nykh priborov  
(All-Union Scientific Research Institute of the Commission  
on Standards, Measures, and Measuring Instruments), created  
from MOIMIP - Moskovskiy gosudarstvennyy institut mer i  
izmeritel'nykh priborov (Moscow State Institute of Measures  
and Measuring Instruments) (October 1955); VNIIPRI -  
Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh  
i radiotekhnicheskikh izmereniy (All-Union Scientific  
Research Institute of Physico-technical and Radio-engineering  
Measurements) in Moscow; MOIMIP - Khar'kovskiy gosudarstvennyy  
institut mer i izmeritel'nykh priborov (Khar'kov State Institute  
of Measures and Measuring Instruments); and MOIMIP - Novosil-  
bivskiy gosudarstvennyy institut mer i izmeritel'nykh priborov  
(Novosilbivsk State Institute of Measures and Measuring Instru-  
ments). No personalities are mentioned. There are no references.

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Tupitsyn, O.V. (VNIIPRI). Studying and Improving Astronomical  
Pendulum Clocks Made by the "Etalon" Plant 33  
Sapozhnikov, M.D., P.M. Fedchenko, and V.M. Dudarchik (MOIMIP).  
Studying Astronomical Pendulum Clocks With Isochronous Suspension 35  
Tovchigrechko, S.S., A.D. Zagatina, L.A. Solov'yeva, and A.I.  
Toropin (VNIIM). Studying Temperature Coefficients of the  
Elongation of Invar Rods Produced by the "Etalon" Plant 36  
Aleksandrov, S.I. (VNIIM) Studying the Pivots of the VNIIM Transit  
Instrument 36  
Tovchigrechko, S.S. (VNIIM). Studying a Model of the Vernier  
Clock 38  
Stepanov, V.S. (VNIIM) Cylindrical Chronograph for Recording the  
Running of Clocks 38  
Card 8/27



L 19574-63 EWT(1)/BDS AFFTC/ASD/ESD-3/AFWL RB/MLK(a)  
ACCESSION NR: AP3008206 S/0286/63/000/013/0052/0052

AUTHOR: Bozhevnikov, N. S.; Shestopalov, L. A.; Tupitsy\*n, O. V. XB

TITLE: Device for measuring the height of cloud cover. Class 42,  
No. 155639 12

SOURCE: Byulleten' izobreteniy i tovarny\*kh znakov, no. 13, 1963,  
52

TOPIC TAGS: cloud height measuring device, cloud cover height,  
quantum mechanical generator, generator, triangulated cloud cover  
height, meteorological instrument.

ABSTRACT: The patent introduces a device for measuring cloud-  
cover height by the triangulation method. The device incorporates  
a quantum generator thereby increasing both the range and accuracy  
of the measurements.

ASSOCIATION: none

Card 1/2

L 19574-63

ACCESSION NR: AP3008206

SUBMITTED: 25Jun62

DATE ACQ: 21Oct63

ENCL: 00

SUB CODE: AS

NO REF SOV: 000

OTHER: 000

Card 2/2

ACC NR: AT7001805 (N)

SOURCE CODE: UR/2778/66/000/015/0007/0012

AUTHOR: Tupitsyn, O. V.

ORG: none

TITLE: Practical realization of a method for the autocompensation of a signal from haze

SOURCE: Leningrad. Nauchno-issledovatel'skiy institut gidrometeorologicheskogo priborostroyeniya. Trudy, no. 15, 1966, 7-12

TOPIC TAGS: meteorologic instrument, <sup>atmospheric</sup> ~~pulsed light~~ cloud, <sup>near</sup> ~~indicator, cloud~~ detection, ~~under signal detection~~, cloud level, detection equipment, bridge circuit

ABSTRACT: A new tracking recorder for determining the height of the lower boundary of clouds is described in detail, and difficulties encountered in using it are discussed. The device (patented by the author--No. 144041) was designed to increase the sensitivity of triangulation devices for cloud height measurement by autocompensation of the signal from haze--sensitivity is increased by one order while the 30-1000 m operating range of the apparatus is retained. The equipment comprises a projector and a variation of a scanning receiver. The projector PI-45 or PI-60 is provided with a flash lamp in place of the incandescent lamp and with a high voltage power pack. In the

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U.S. none

ACC NR: AT7001805

receiver the field of view is divided in half, both halves able to receive adjacent portions of the light beam from the projector. Haze signals will be obtained from any operating position of the receiver: the values of these signals are so close that when they are algebraically added in the bridge circuit their difference is less than the sensitivity of the system and the device will not react to them. However, a signal from a light spot on a cloud will unbalance the circuit until the receiver is brought to such a position that the light spot is symmetrical in both halves of the field of view, at which time the cloud ceiling can be read. The receiver may be a parabolic reflector or a lens with the diaphragm of the field of view in its focus. The scanning section of the apparatus comprises the prism system, photoelements with a bridge circuit and a preamplifier connected by an electric cable to the main amplifier and the power pack. A switch for reversing the motor and a synchro converter for converting the angle of the position of the scanner into voltage are positioned on the shaft of the scanner. Thus the motor is activated by signals from the amplifier and from the switch; from the moment the receiver is switched on the motor will raise or lower the receiver until a light spot is in one half of the field of view; the motor control unit then brings the system into position so the bridge current is balanced. The automatic recorder utilizes a conventional M-375 self-registering 2 ma milliammeter. Preliminary tests showed this cloud height recorder automatically compensates for haze and distinguished the signals from clouds. The signals, however, are weaker than calculated, because of receiver limitations only a portion of the signal fall by the field of view of the reflector, and in the case of the lens there is no compensation for the weakening of the signal as it enters the optical system. Need for

Card 2/3

ACC NR: AT7001805

increased light output by the projector is indicated. Orig. art. has: 5 figures. [06]

SUB CODE: 04/1/SUBM DATE: none/ ORIG REF: 001/ ATD PRESS: 5117

ACC NR: AT5022098

UR/2778/65/000/014/0075/0037

AUTHOR: Tupitsin, O.V.

TITLE: Automatic compensation of the background signal in triangularization type cloud ceiling indicators 32  
B+1

SOURCE: Leningrad. Nauchno-issledovatel'skiy institut gidrometeorologicheskogo priborostroyeniya. Izv. no. 14, 1965, 75-87

TOPIC TAGS: meteorological instrument, cloud level, cloud cover

ABSTRACT: The paper contains an analysis of the precision limits of cloud level measurement by an improved instrument, with an automatic compensation of the background "fog" signal. The instrumentation system is basically a conventional oscillating optical scanner examining the bright cloud reflection spots produced by a remotely located vertical beam searchlight. The proposed compensation is achieved by splitting the field of vision of the scanner photocell into two halves and evaluating their signal difference. Encounter with a bright spot during scanning produces then a positive and a negative pulse due to the time difference in the signal appearance in the first and the second half of the split field. The cloud ceiling height is determined by the zero crossing point between the pulses. A detailed description of the instrument has been given by the author before (Avtorskoye svidetel'stvo No. 14401). Analysis and comparison with the presently operational equipment (e.g. RINGO A-26) based upon the

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L. 0017-06

ACC NR: AT5022098

triangularization principle without compensation shows a substantial advantage of the proposed system. Its signal-to-required sensitivity ratio is superior (larger by an order of magnitude) for all practical base distances and cloud ceiling altitudes. The advantages permit also the elimination of operator's subjective influence via his choices and adjustments of sensitivity. There is also a more consistent record of the measurements, the measurements depending upon the centers of the bright spots instead of upon the beginning of the working signal. The orig. art. has 9 figures, 5 tables.

ASSOCIATION: NIIGMP

SUBMITTED: 00

ENCL.: 00

SUB CODE: 08

NO REF SOV: 002

OTHER: 00

(18)

HW  
Card 2/2

TUPITSYN, P., kand. tekhn.nauk

Signal whistle for adjusting ignition. Avt. transp. 37 no.10:54  
0 '59. (MIRA 13:2)  
(Automobiles--Ignition)



TUPITSYN, P., kand.tekhn.nauk

Device for determining the technical condition of the cylinder-piston unit and valves. Avt.transp. 38 no.6:23-25 Je '60. (MIRA 14:4)

1. Lenfilial Nauchno-issledovatel'skogo instituta avtomobil'nogo transporta.

(Motor vehicles--Maintenance and repair)

TUPITSYN, Petr Sergeyevich, kand. tekhn. nauk; BARANOV, A.Ya.,  
red.

[Checking technical conditions of the cylinder-piston group  
and valves of motor-vehicle engines without dismantling] Kon-  
trol' tekhnicheskogo sostoiania tsilindro-porshnevoi grupy i  
klapanov avtomobil'nykh dvigatelei bez razborki. Moskva, Av-  
totransizdat, 1963. 25 p. (MIRA 17:4)

TUPITSYN, Petr Sergeyevich, kand.tekhn.nauk; BODRILIN, A.P., red.;  
DONSKAYA, G.D., tekhn.red.

[Determining technical state of the cylinder-piston group of  
automobile carburetor engines] Metody opredeleniia tekhnicheskogo  
sostoianiiia tsilindro-porshnevoi gruppy avtomobil'nykh karbiura-  
tornykh dvigatelei. Moskva, Avtotransizdat, 1960. 27 p.

(Automobiles--Engines--Cylinders)

(MIRA 13:7)

~~TUPITSYN~~ Petr Sergeyevich, kand. tekhn. nauk; BARANOV, A.Ya., red.;  
GALAKTIONOVA, Ye.N., tekhn. red. ...

[Checking the technical condition of the cylinder-piston group and valves of motor-vehicle engines without dismantling] Kontrol' tekhnicheskogo sostoyaniya tsilindroporshnevoi gruppy i klapanov avtomobil'nykh dvigatelei bez razborki. Moskva, Avtotransizdat, 1963. 25 p.

(MIRA 16:9)

(Motor vehicles--Engines)

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 3, p 140 (USSR) SOV/137-59-3-5930

AUTHORS: Blagodatskiy, L. I., Ignashin, V. F., Klimovitskiy, Z. L., Tupitsyn, S. P.

TITLE: A Gantry-type, Two-electrode Machine for Two-sided Spot Welding  
(Portal'naya dvukhelektrodnaya mashina dlya dvukhstoronney  
tochechnoy svarki)

PERIODICAL: Byul. tekhn.-ekon. inform. Sovnarkhoz Bryanskogo ekon. adm.  
r-na, 1958, Nr 1, pp 28-31

ABSTRACT: A machine for resistance spot welding of the sides of all-metal, large-capacity refrigerator cars was developed and adopted at the Bryansk machine-building plant. The machine is capable of performing two spot welds simultaneously. The current for each electrode is supplied from two transformers of a capacity of 150 kva each. Under completely mechanized conditions, the productivity of the machine amounts to 2000 spot welds per hour. The members being welded are 2-4 mm thick. A block diagram of the electrical system is presented together with over-all views of the machine and of the complete installation.

D. F.

Card 1/1

PROCESS AND REFINING																									
ETCHING OF LATTEN ARTICLES																									
<p>Etching of latten articles 1. S. Mikhaylov and I. I. Luptsyk. <i>Tekhn. Metal.</i> 1938, No. 1, 91-2. <i>Khim. Neftepr. Zhur.</i> 1, No. 11-12, 100 (1939). M and I propose to substitute the mixt. of <math>\text{HNO}_3</math> with <math>\text{H}_2\text{SO}_4</math> (which is usually used for the refining of latten articles) with either one of the 2 kinds of mixts.: <math>\text{Cr}_2\text{O}_3</math> (8% and 10%), <math>\text{H}_2\text{SO}_4</math> (3% and 5%) and <math>\text{NaCl}</math> (0.2%). Better results were obtained with the etching with these 2 mixts. after a 3 month investigation in a corrosion chamber. The refining process takes 5 min. The use of these reagents is less dangerous to the health of the workers, and the cost of the initial materials is smaller. W. R. Henn</p>																									
<p>ASR-5LA METALLURGICAL LITERATURE CLASSIFICATION</p>																									

Cleaning and Finishing

19

Met. Gbs.  
v.9.

**The Etching of Brass Parts.** L. S. Mikhitar'yan and T. I. Tupitaya (*Tsvet. Metall. (Non-Ferrous Metals)*, 1939, (4), 91-92). [In Russian.] The "white" etching of brass in a nitric acid sulphuric acid mixture is unsatisfactory, as it gives rise to noxious fumes which have to be rapidly removed, and leaves a surface relatively easily subject to corrosion. Tests have shown that a surface possessing the same appearance, and at the same time much more corrosion-resistant, is obtained by etching brass for five minutes in a solution containing  $\text{CrO}_3$  9,  $\text{H}_2\text{SO}_4$  3, and  $\text{NaCl}$  0.2%. The  $\text{NaCl}$  should not exceed 0.2%, as otherwise the metal is pitted. The solution recommended is much more convenient for practical use than the mixed-acid solution. —A. B.

USSR/ Electronics - Radio

Card 1/1 Pub. 89 - 5/30

Authors : Tupitsyn, V.

Title : For developing ultra-short-wave sport

Periodical : Radio 1, page 9, Jan 56

Abstract : The activities of various amateur radio organizations in Moscow and Rostov are related with a description of some of the material used by them.

Institution : .....

Submitted : .....



TUFITSYN, V.

36260 Moy metod formovaniya i pressovaniya yaroslavskogo syra. (Iz opyta mastera i-go klassa). Moloch. Prom-st', 1949, No. 11, s. 41-42

SC: Lëtapis' Zhurnal'nykh Statey, No. 49, 1949

TUPITSYN, V. (Moskva)

~~Develop the hobby of ultrashortwave radio. Radio no.1:9 Ja '56.~~  
(Radio, Shertwave) (MIRA 9:4)

36260 For Metod Formovaniya i Trebovaniya Iaroslavskogo Syna. (Isklyucheniye  
1-Go Klasa.) Moloch Prom-st', 1949, No. 11, s. 41-42

20: Leto is' Zhurnal'nykh Statey, No. 19, 1945

TUPITSYN, V. M., Eng.; AYZENBERG, N. M., Eng.

**Spires**

Dismantling of crane and installation of spire on tall buildings. Mekh. stroi. 9, no. 8, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.